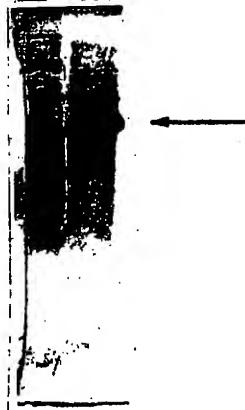
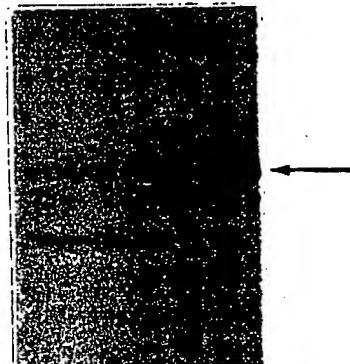


FIG. 1A

919 (46 kDa)

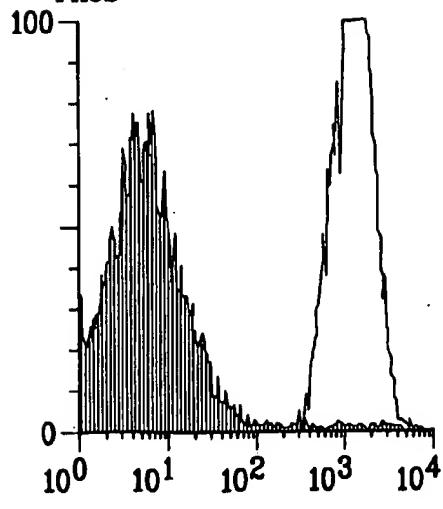
PURIFICATION
M1 919*FIG. 1B*

919 (46 kDa)

WESTERN BLOT
OMV TP PP*FIG. 1C*

919 (46 kDa)

FACS

*FIG. 1D*

919 (46 kDa)

BACTERICIDAL ASSAY

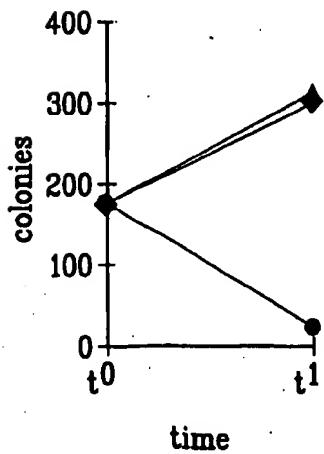
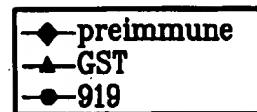
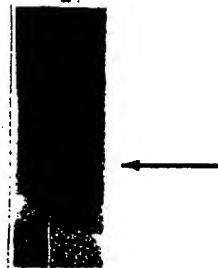
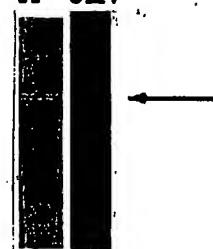
*FIG. 1E*919 (46 kDa)
ELISA assay: positive

FIG. 2A

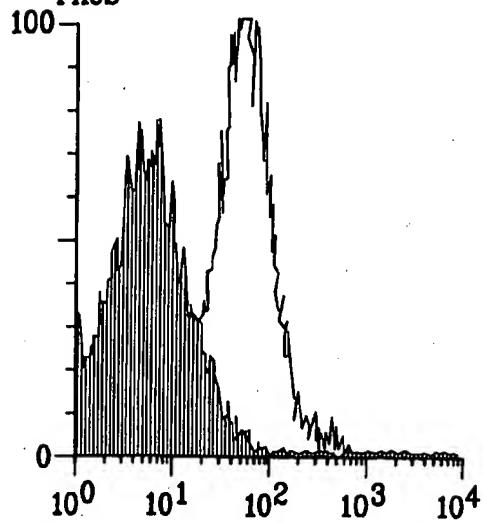
279 (10.5 kDa)
PURIFICATION
M1_279

*FIG. 2B*

279 (10.5 kDa)
WESTERN BLOT
TP OMV

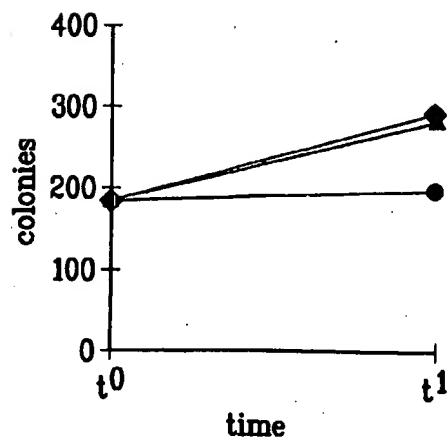
*FIG. 2C*

279 (10.5 kDa)
FACS

*FIG. 2D*

279 (10.5 kDa)
BACTERICIDAL ASSAY

- ◆ preimmune
- ▲ GST
- 279

*FIG. 2E*

279 (10.5 kDa)

ELISA assay: positive

FIG. 3A

576 (27.8 kDa)

PURIFICATION

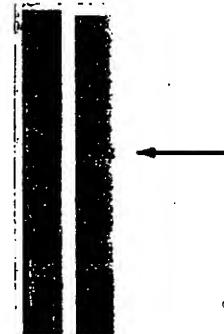
M1 576

**FIG. 3B**

576 (27.8 kDa)

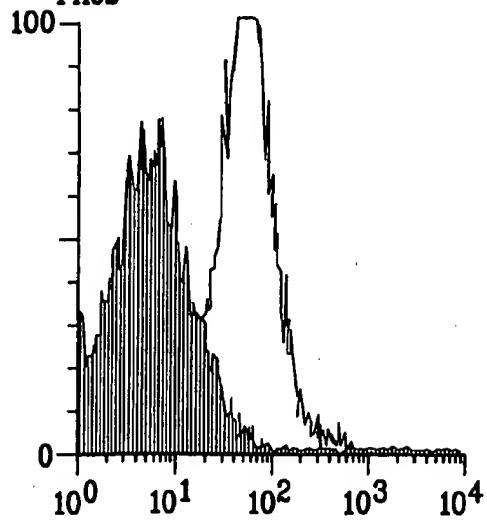
WESTERN BLOT

TP OMV

**FIG. 3C**

576 (27.8 kDa)

FACS

**FIG. 3D**

576 (27.8 kDa)

BACTERICIDAL ASSAY

- ◆ preimmune
- ▲ GST
- 576

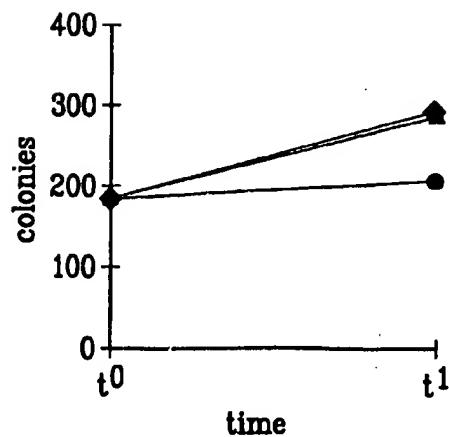
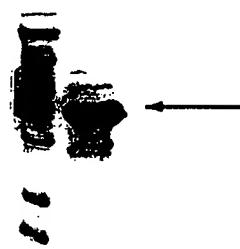
**FIG. 3E**576 (27.8 kDa)
ELISA assay: positive

FIG. 4A

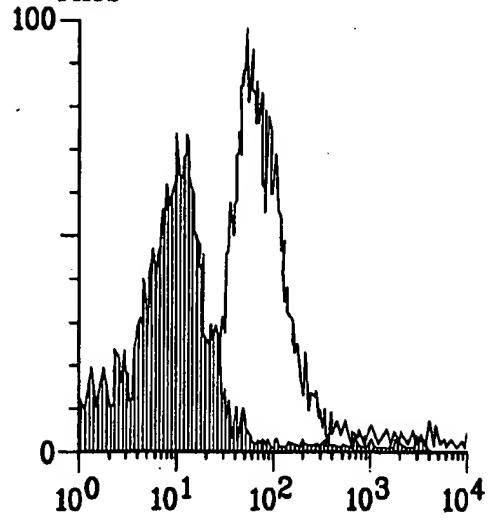
519 (33 kDa)
PURIFICATION
M1 519

**FIG. 4B**

519 (33 kDa)
WESTERN BLOT
TP OMV

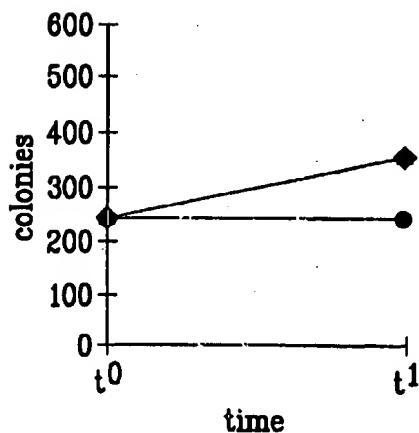
**FIG. 4C**

519 (33 kDa)
FACS

**FIG. 4D**

519 (33 kDa)
BACTERICIDAL ASSAY

◆ preimmune
▲ GST
● 519

**FIG. 4E**

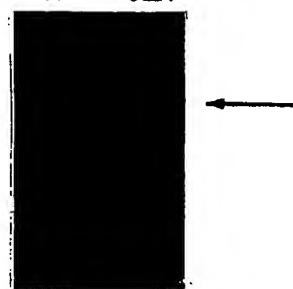
519 (33 kDa)
ELISA assay: positive

FIG. 5A

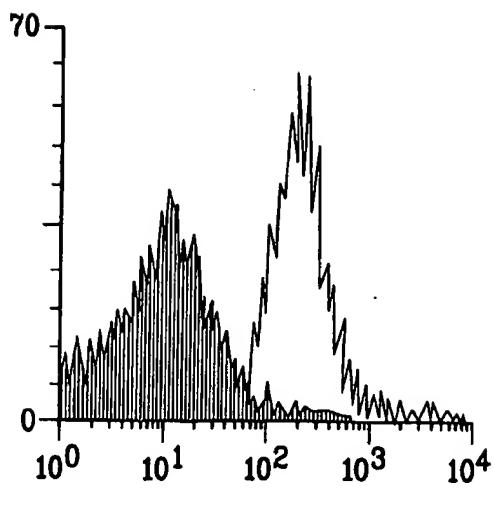
121 (40 kDa)
PURIFICATION
M1 121

*FIG. 5B*

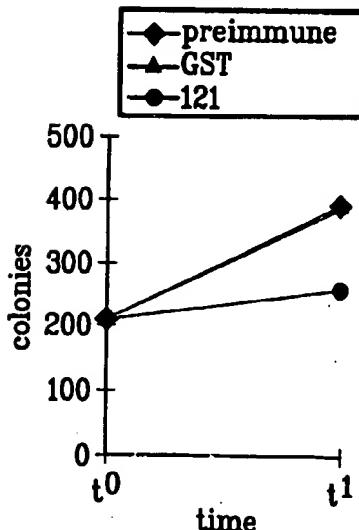
121 (40 kDa)
WESTERN BLOTH
TP OMV

*FIG. 5C*

121 (40 kDa)
FACS

*FIG. 5D*

121 (40 kDa)
BACTERICIDAL ASSAY

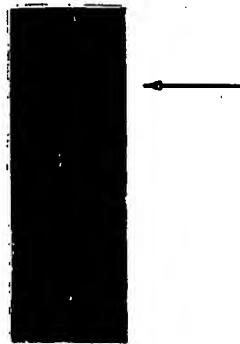
*FIG. 5E*

121 (40 kDa)

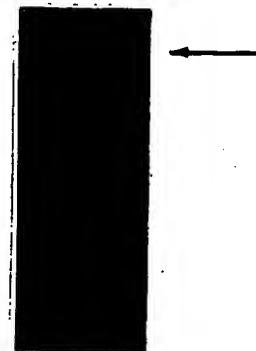
ELISA assay: positive

FIG. 6A

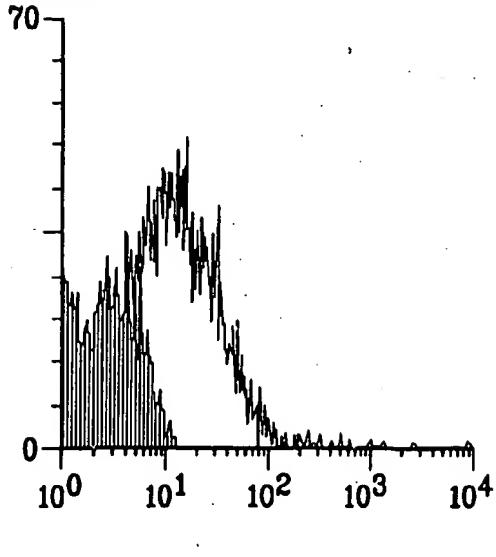
128 (101 kDa)
PURIFICATION
M1 128

*FIG. 6B*

128 (101 kDa)
WESTERN BLOTH
TP OMV

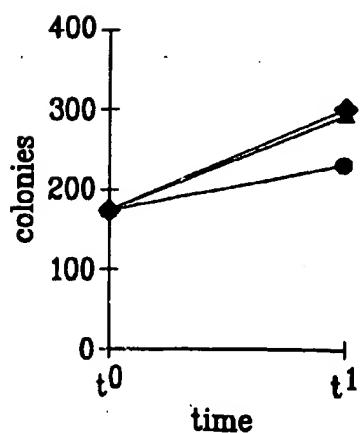
*FIG. 6C*

128 (101 kDa)
FACS

*FIG. 6D*

128 (101 kDa)
BACTERICIDAL ASSAY

◆ preimmune
▲ GST
● 128

*FIG. 6E*

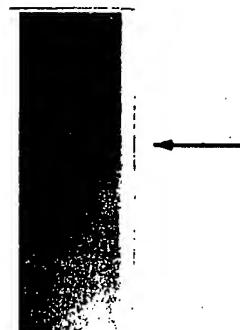
128 (101 kDa)
ELISA assay: positive

FIG. 7A

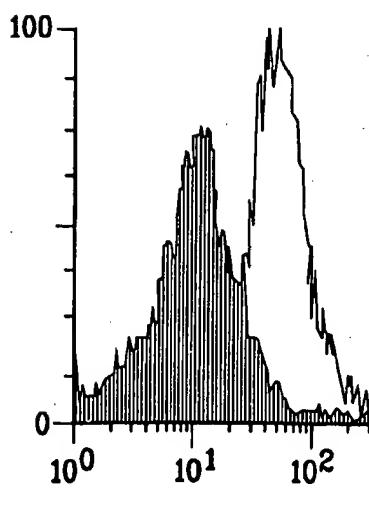
206 (17 kDa)
PURIFICATION
M1 206

*FIG. 7B*

206 (17 kDa)
WESTERN BLOD
TP OMV

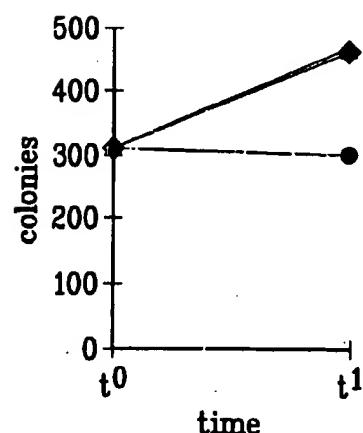
*FIG. 7C*

206 (17 kDa)
FACS

*FIG. 7D*

206 (17 kDa)
BACTERICIDAL ASSAY

- ◆ preimmune
- ▲ GST
- 206

*FIG. 7E*

206 (17 kDa)

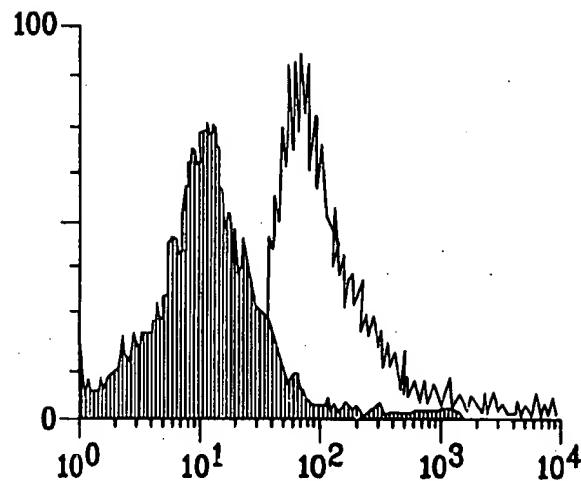
ELISA assay: positive

FIG. 8A

287 (78 kDa)
PURIFICATION
M1 287

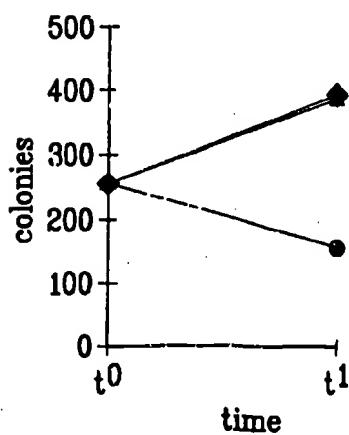
*FIG. 8B*

287 (78 kDa)
FACS

*FIG. 8C*

287 (78 kDa)
BACTERICIDAL ASSAY

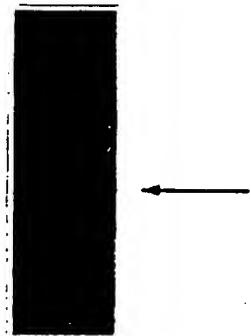
- ◆ preimmune
- ▲ GST
- 206

*FIG. 8D*

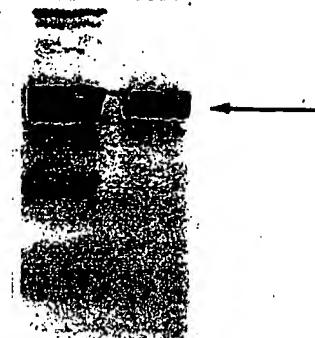
287 (78 kDa)
ELISA assay: positive

FIG. 9A

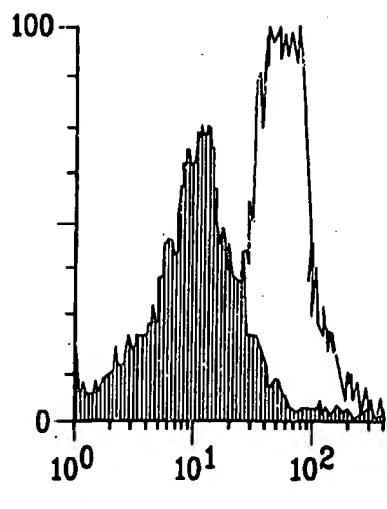
406 (33 kDa)
PURIFICATION
M1 406

**FIG. 9B**

406 (33 kDa)
WESTERN BLOT
TP OMV

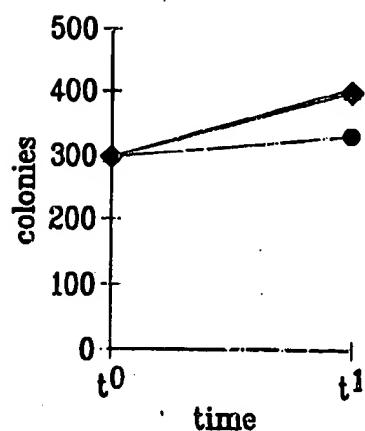
**FIG. 9C**

406 (33 kDa)
FACS

**FIG. 9D**

406 (33 kDa)
BACTERICIDAL ASSAY

- ◆ preimmune
- ▲ GST
- 406

**FIG. 9E**

406 (33 kDa)
ELISA assay: positive

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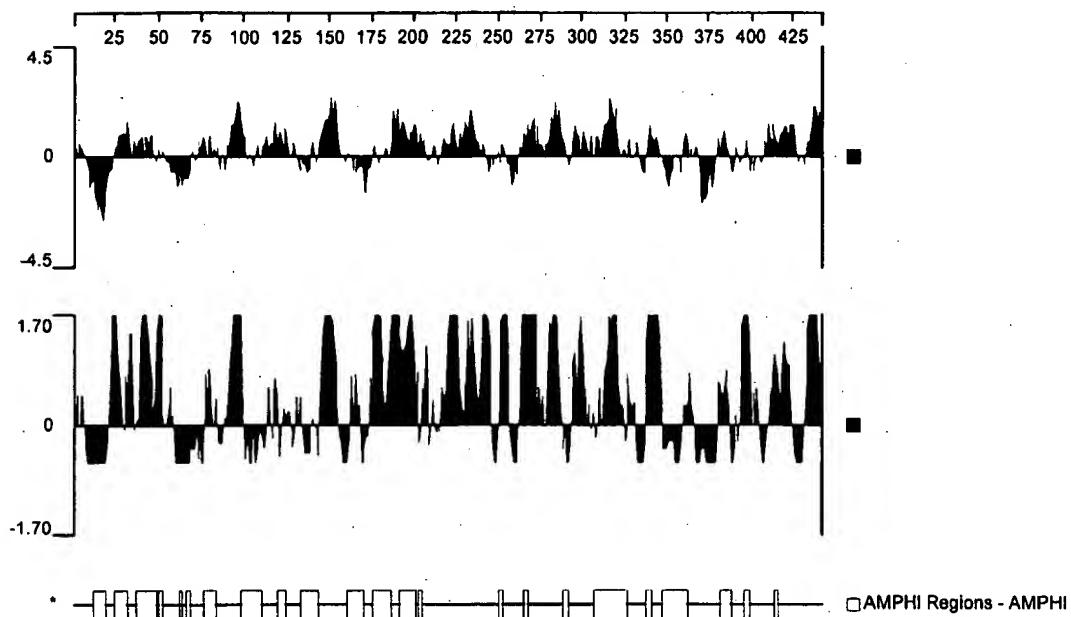
919Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 10

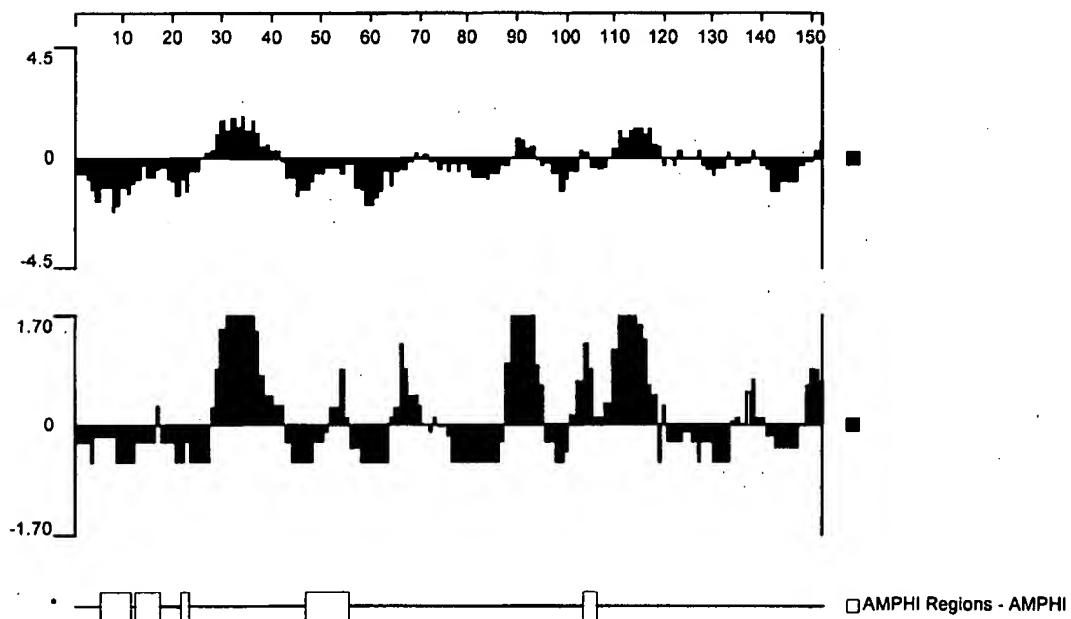
279Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 11

576-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

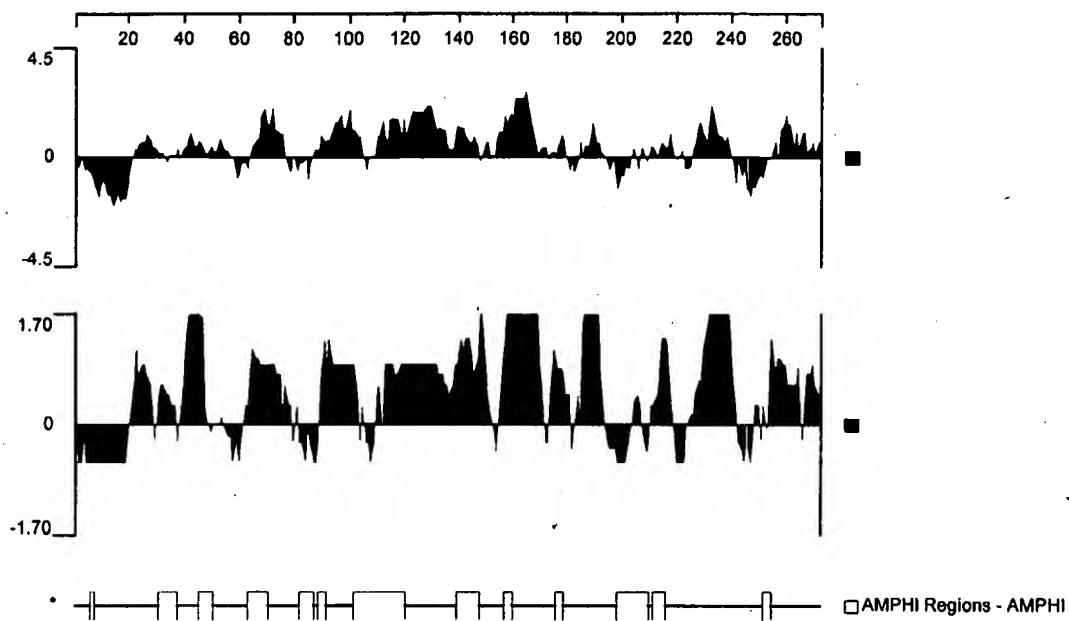


Fig. 12

519-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

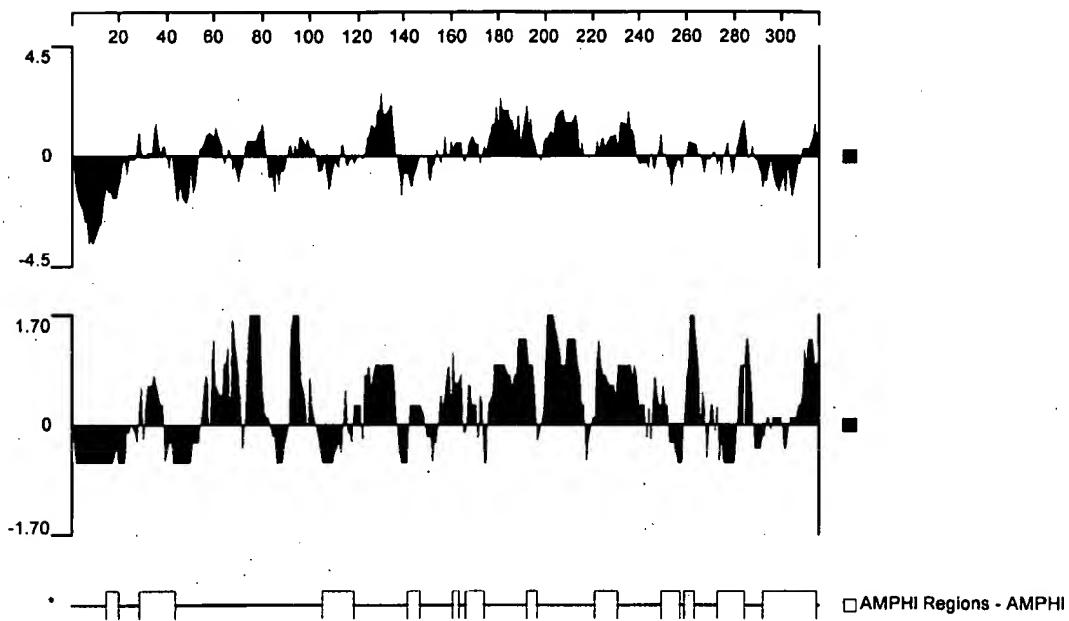


Fig. 13

121-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

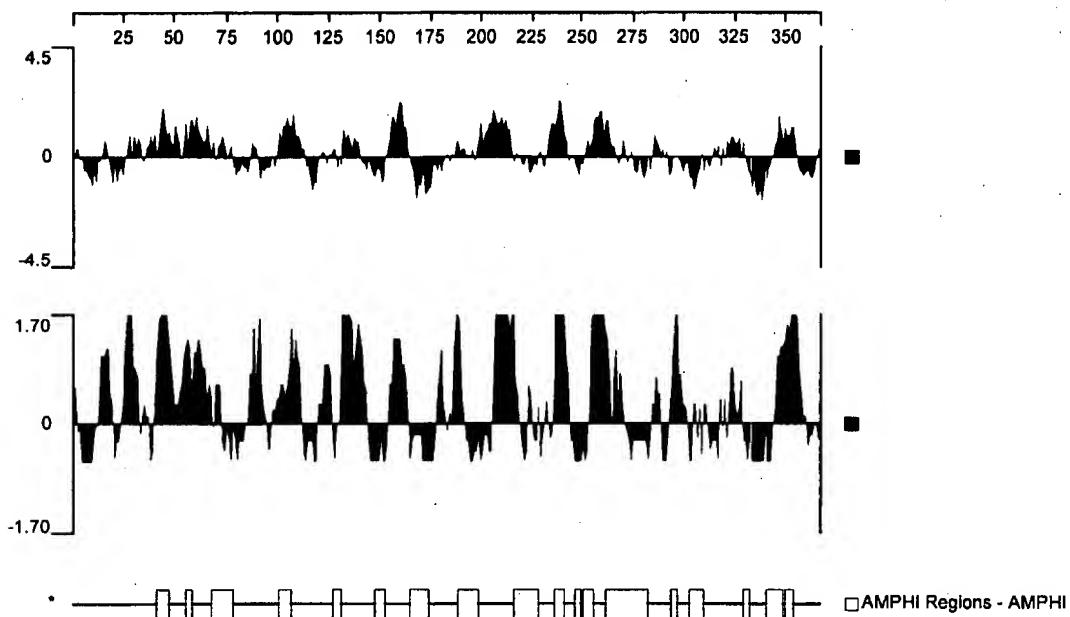


Fig. 14

128-1
Hydrophilicity Plot, Antigenic Index and AMPHI Regions

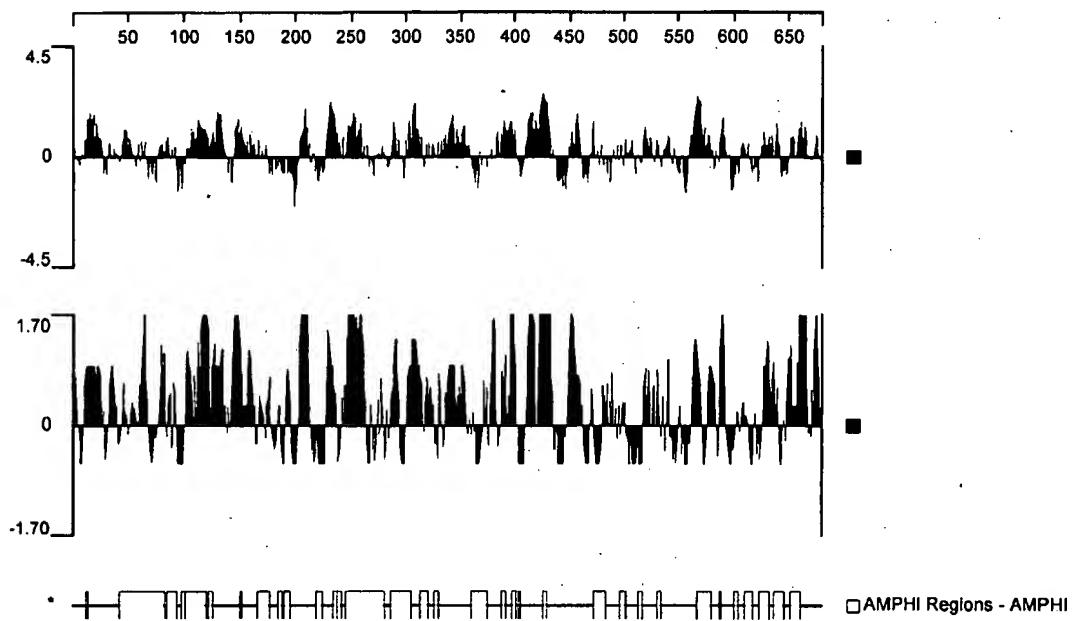


Fig. 15

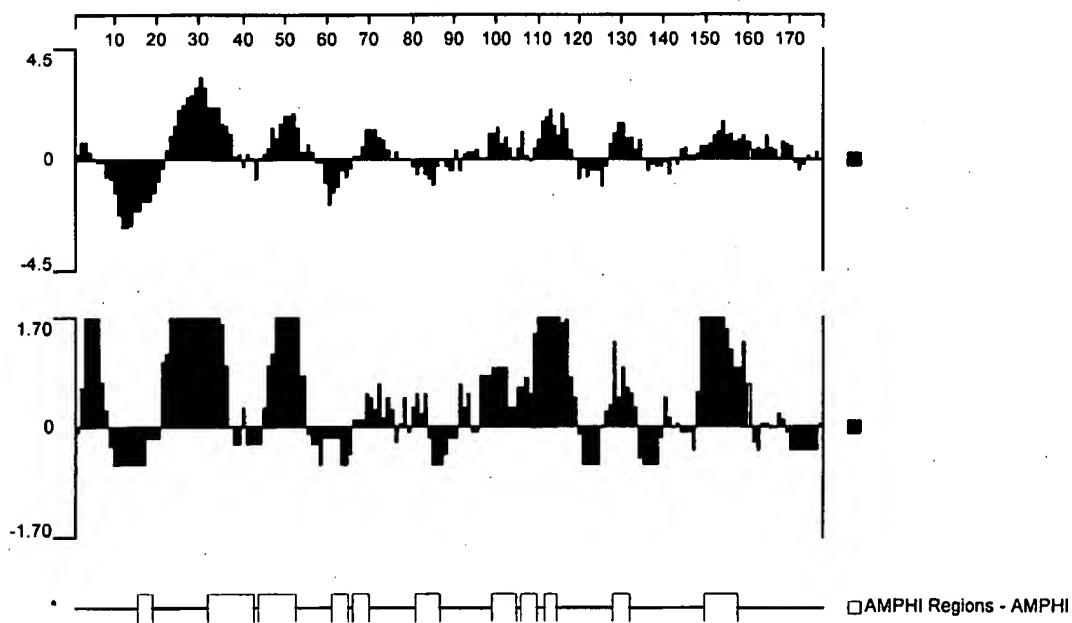
206Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 16

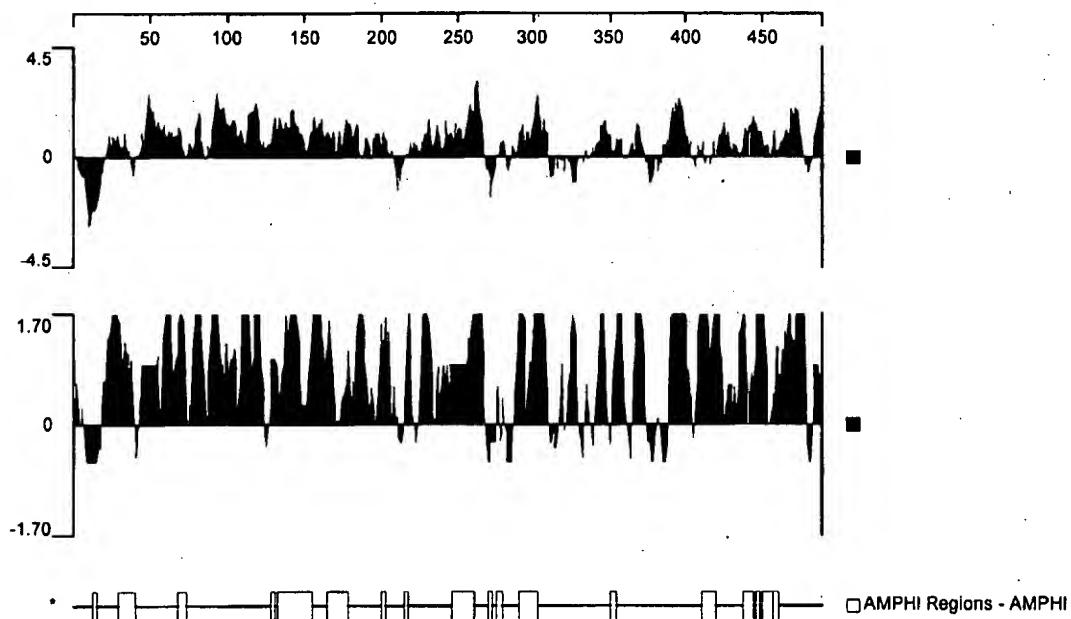
287Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 17

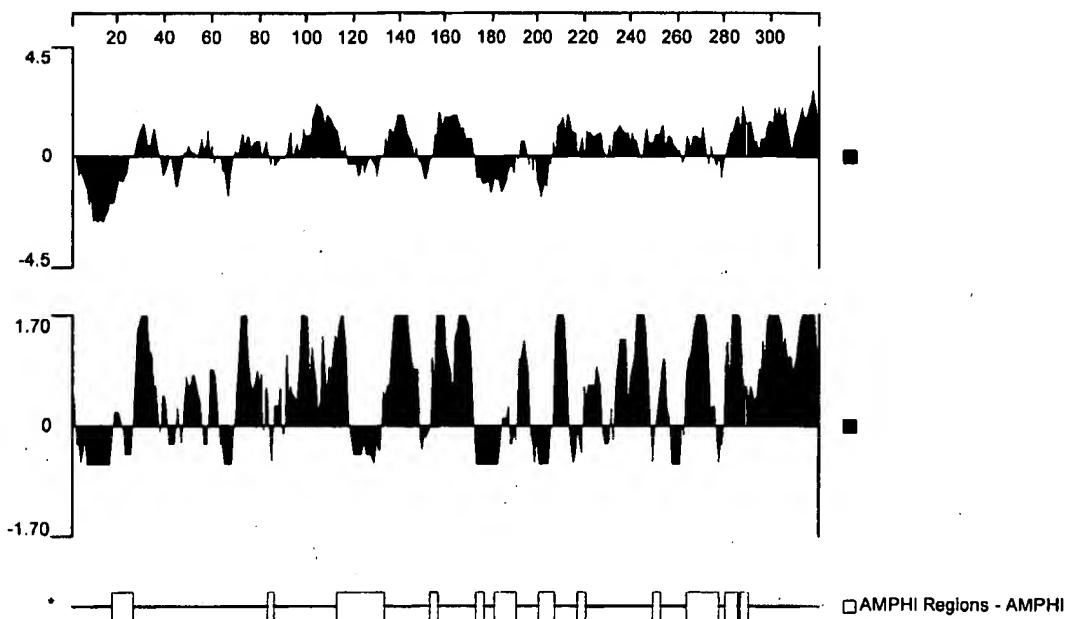
406Hydrophilicity Plot, Antigenic Index and AMPHI Regions

Fig. 18

zo05_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo08_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
z2491	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo11_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo20_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo01_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo09_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo12_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo22_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo23_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo24_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo25_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo26_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo96_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo02_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo04_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo06_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo07_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo10_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo14_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo16_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo17_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo18_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo19_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo21_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo27_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo28_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo29_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo31_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo03_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo15_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
fa1090	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo32_225	1	MDSFFKPAVWAFLWLMFAVRPALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo33_225	1	MDSFFKPAVWAFLWLMFAVRSALADELTNLLSSREQILRQFAEDEQPVLPINRAPARRAG
zo05_225	61	NADELIGSAMGLNE
zo08_225	61	NADELIGSAMGLNE
z2491	61	NADELIGSAMGLNE QPVLPVNRVPARRAGNADELIGSAMGLNEQPVLPVNRVPARRAGNA
zo11_225	61	NADELIGSAMGLNE QPVLPVNRVPARRAGNADELIGSAMGLNEQPVLPVNRVPARRAGNA
zo20_225	61	NADELIGSAMGLNE QPVLPINRAPARRAGNADELIGSAMGLNEQPVLPVNRVPARRAGNA
zo01_225	61	NADELIGSAMGLNE
zo09_225	61	NADELIGSAMGLNE
zo12_225	61	NADELIGSAMGLNE
zo22_225	61	NADELIGSAMGLNE
zo23_225	61	NADELIGSAMGLNE
zo24_225	61	NADELIGSAMGLNE
zo25_225	61	NADELIGSAMGLNE
zo26_225	61	NADELIGSAMGLNE
zo96_225	61	NADELIGSAMGLNE
zo02_225	61	NADELIGSAMGLNE
zo04_225	61	NADELIGSAMGLNE
zo06_225	61	NADELIGSAMGLNE
zo07_225	61	NADELIGSAMGLNE
zo10_225	61	NADELIGSAMGLNE
zo14_225	61	NADELIGSAMGLNE
zo16_225	61	NADELIGSAMGLNE
zo17_225	61	NADELIGSAMGLNE
zo18_225	61	NADELIGSAMGLNE
zo19_225	61	NADELIGSAMGLNE
zo21_225	61	NADELIGSAMGLNE
zo27_225	61	NADELIGSAMGLNE
zo28_225	61	NADELIGSAMGLNE
zo29_225	61	NADELIGSAMGLNE
zo13_225	61	NADELIGSAMGLNE
zo03_225	61	NADELIGSAMGLNE
zo15_225	61	NADELIGSAMGLNE
fa1090	61	NADELIGSAMGLNE
zo32_225	61	NADELIGSAMGLNE
zo33_225	61	NADELIGSAMGLNE

FIG. 19A

FIG. 19B

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zo05_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo08_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
z2491	241	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo11_225	241	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo20_225	241	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo01_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo09_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo12_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo22_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo23_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo24_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo25_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo26_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo96_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo02_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo04_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo06_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo07_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo10_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo14_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo16_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo17_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo18_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo19_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo21_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo27_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo28_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo29_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo13_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo03_225	212	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo15_225	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
fa1090	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo32_225	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*
zo33_225	183	IHAPRTGKNIEITSLSHKYWSGKYAFARRVKKNDPSRFLN*

Fig. 19C

FIG. 20A

gnmzq09	121	YQILD SVTTVSAKARLVD SRNGKVLWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq31	121	YQILD SVTTVSAKARLVD SRNGKVLWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
fa1090	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV GAVVNQIANSLT
gnmzq32	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV GAVVNQIANSLT
gnmzq33	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV GAVVNQIANSLT
gnmzq01	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq05	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq08	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq02	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq03	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq04	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq07	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq10	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq11	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq13	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq15	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq16	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq17	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq19	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq21	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq22	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq23	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq24	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq25	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq27	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq28	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq29	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
z2491	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV SAVVNQIANSLT
gnmzq14	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV GAVVNQIANSLT
gnmzq18	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV GAVVNQIANSLT
gnmzq26	121	YQILD SVTTVSAKARLVD SRNGKELWSGSASIREGSNNNSNSGIL GALV GAVVNQIANSLT
gnmzq09	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq31	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
fa1090	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq32	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq33	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq01	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq05	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq08	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq02	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq03	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq04	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq07	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq10	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq11	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq13	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq15	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq16	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq17	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq19	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq21	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq22	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq23	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq24	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq25	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq27	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq28	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq29	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
z2491	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq14	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq18	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*
gnmzq26	181	DRGYQVSKTAAYNLLSPYSHNGILKGPRFVEEQPK*

FIG. 20B

287_14	1	MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVV E	KETEA
287_2	1	MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVV E	KETEA
287_21	1	MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVV E	KETEA
z2491	1	MFKRSVIAMACIFALSACGGGGGGSPDVKSADTLSKPAAPVV E	KETEA
287_9	1	MFKRSVIAMACIVALSACGGGGGGSPDVKSADTLSKPAAPVV E EDVGEEVLPKEKKDEEA	
fa1090	1	MFKRSVIAMACIFPLSACGGGGGGSPDVKSADTPSKPAAPVV E ENAGEGVLPKEKKDEEA	
287_14	50	KEDAPQAGSQGQGAPS A QGQDMAAVSEENTNGGAAATDKPKNEDEGAQNDMPQNAADT	
287_2	50	KEDAPQAGSQGQGAPS A QGQDMAAVSEENTNGGAAATDKPKNEDEGAQNDMPQNAADT	
287_21	50	KEDAPQAGSQGQGAPS A QGQDMAAVSEENTNGGAAVTADNPKNEDEVQAQNDMPQNAAGT	
z2491	50	KEDAPQAGSQGQGAPS A QGQDMAAVSEENTNGGAAVTADNPKNEDEVQAQNDMPQNAAGT	
287_9	61	VSGAPQAD T ..QDATA G KGQDMAAVSEENTNGGAAATTDNPENRDEGPQNDMPQNAADT	
fa1090	61	AGGAPQAD T ..QDATA G GSQDMAAVSEENTNGGAAATTDNPKNEDAGAQNDMPQNAA..	
287_14	110	DSLTPNHTPASNM P AGN M NQADAGESE S Q P ANQ P D M AN T ADGMQGDDPSAGGENAGNTA	
287_2	110	DSLTPNHTPASNM P AGN M NQADAGESE S Q P ANQ P D M AN T ADGMQGDDPSAGGENAGNTA	
287_21	110	DSSTPNHTPD P NMLAGN M NQADAGES S Q P ANQ P D M AN T ADGMQGDDPSAGGENAGNTA	
z2491	110	DSSTPNHTPD P NMLAGN M NQADAGES S Q P ANQ P D M AN T ADGMQGDDPSAGGENAGNTA	
287_9	119	DSSTPNHTPAPNM P TRD M NQADAGES S Q P ANQ P D M AN T ADGMQGDDPSAGGENAGNTA	
fa1090	117	
287_14	170	AQGT N QAE NN QTAGS Q N P ASS S NE S AT N SGDFGR T N V C N S V IDGPSQNITLTHCKGDS	
287_2	170	AQGT N QAE NN QTAGS Q N P ASS S NE S AT N SGDFGR T N V C N S V IDGPSQNITLTHCKGDS	
287_21	170	AQGAN N QAC NN Q A AGSS D PIP A N PAPANGGSNFGRVD T ANGV V IDGPSQNITLTHCKGDS	
z2491	170	AQGAN N QAC NN Q A AGSS D PIP A N PAPANGGSNFGRVD T ANGV V IDGPSQNITLTHCKGDS	
287_9	178	DORANO N QAE NN Q V CGS Q N P ASS S DN N AT N GGSDFGRIN V ANGEKTD S GESEN V TLTHCKDKV	
fa1090	117	.ESANQ T GN N Q P AG S SD S AP A N PAPANGGSDFGR T N V C N S V IDGPSQNITLTHCKGDS	
287_14	230	CSGNNFLDEEVQLKSEFEKLS D AKI S NYKKDGKNDGKNDKFVGLVADS V QMKGINOYII	
287_2	230	CSGNNFLDEEVQLKSEFEKLS D AKI S NYKKDGKNDGKNDKFVGLVADS V QMKGINOYII	
287_21	230	CSGNNFLDEEVQLKSEFEKLS D AKI S NYKK...DGKNDKFVGLVADS V QMKGINOYII	
z2491	230	CSGNNFLDEEVQLKSEFEKLS D AKI S NYKK...DGKNDKFVGLVADS V QMKGINOYII	
287_9	238	CDRD.FLDEEAPPKSEFEKLSDEEKINKYKK...DEQREN F VGLVADRV E KNGT N KY V I	
fa1090	176	CNGDNILDEEAPS K SEFEKLSDEEKIKRYKK...DEQREN F VGLVADRVKKDG T N K Y V I	
287_14	290	FYKPKP.. W SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG	
287_2	290	FYKPKP.. W SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG	
287_21	286	FYKPKP.. W SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG	
z2491	286	FYKPKP.. W SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG	
287_9	293	IYKD K SAS S SFARFRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG	
fa1090	232	FYTDK K PEP TRSARSRRSLPAEMPLIPVNQADTLIVDGEAVSLTGHSGNIFAPEG	
287_14	348	NYRLTYGAEKLP G GSYALRVQ G EP S K G EM L AG T AVYNGEVLHF H TENGRPS P GRFAA	
287_2	348	NYRLTYGAEKLP G GSYALRVQ G EP S K G EM L AG T AVYNGEVLHF H TENGRPS P GRFAA	
287_21	344	NYRLTYGAEKLP G GSYALRVQ G EP A K G EM L AG A AVYNGEVLHF H TENGRPY P GRFAA	
z2491	344	NYRLTYGAEKLP G GSYALRVQ G EP A K G EM L AG A AVYNGEVLHF H TENGRPY P GRFAA	
287_9	353	NYRLTYGAEL G GSYALRVQ G EP A K G EM L AG T AVYNGEVLHF H MENGRPS P CGRF A A	
fa1090	285	NYRLTYGAEKLP G GSYALRVQ G EP A K G EM L VG T AVYNGEVLHF H MENGRPY P CGRF A A	
287_14	408	KVDFGSKSVDGIIDSGD G LHMGTQKFKAIDGNGFKGTWTENG G GDVSGKFYGPAGEEEVA	
287_2	408	KVDFGSKSVDGIIDSGD G LHMGTQKFKAIDGNGFKGTWTENG G GDVSGKFYGPAGEEEVA	
287_21	404	KVDFGSKSVDGIIDSGD G LHMGTQKFKAIDGNGFKGTWTENG G GDVSGKFYGPAGEEEVA	
z2491	404	KVDFGSKSVDGIIDSGD G LHMGTQKFKAIDGNGFKGTWTENG G GDVSGKFYGPAGEEEVA	
287_9	413	KVDFGSKSVDGIIDSGD G LHMGTQKFKAIDGNGFKGTWTENG G GDVSGKFYGPAGEEEVA	
fa1090	345	KVDFGSKSVDGIIDSGD G LHMGTQKFKAIDGNGFKGTWTENG G GDVSGKFYGPAGEEEVA	

FIG. 21A

287_14	468	GKYSYRPTDAEKGGFGVFA G KKEQD*
287_2	468	GKYSYRPTDAEKGGFGVFA G KKEQD*
287_21	464	GKYSYRPTDAEKGGFGVFA G KKEQD*
z2491	464	GKYSYRPTDAEKGGFGVFA G KKEQD*
287_9	473	GKYSYRPTDAEKGGFGVFA G KKEQD*
fa1090	405	GKYSYRPTDAEKGGFGVFA G KKEQD*

FIG. 21B

zv24_519	1	MEFFIILLAAVVFGFKSVVIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv26_519	1	MEFFIILLAAVVFGFKSVVIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv22_519ass	1	MEFFIILLAAVVFGFKSVVIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
fa1090_519	1	MEFFIILLAAVVFGFKSVVIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv32_519	1	MEFFIILLAAVVFGFKSVVIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv11_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv28_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv96_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv02_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv03_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv04_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv05_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv01_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv07_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv12_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv18_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv19_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv21_519ass	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv27_519	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv20_519ass	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv06_519ass	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs
zv29_519ass	1	MEFFIILLAAVAVFGFKSFVVIPIPQQEvhvverlgrfhraltaglnilipf idrvayrhs

z2491_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv26_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv22_519ass	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
fa1090_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv32_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv11_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv28_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv96_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv02_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv03_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv04_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv05_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv01_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv07_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv12_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv18_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv19_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv21_519ass	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv27_519	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv20_519ass	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv06_519ass	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG
zv29_519ass	61	KEIPLDVP SQVCITRDNTQLTVVDGIIYFQVTDPK LASYGSNNYIMA ITQLAQTTLRSVIG

z491_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv26_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv22_519ass	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
fa1090_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv32_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv11_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv28_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv96_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv02_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv03_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv04_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv05_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv01_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv07_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv12_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv18_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv19_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv21_519ass	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv27_519	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv20_519ass	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv06_519ass	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE
zv29_519ass	121	RMELDKTFEERDEINSTVV\$ALDEAAGAWGVVKVLRYEIKDLVPPQEIELRSMQAQITAERE

FIG. 22A

z2491_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv26_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv22_519ass	181	KRARIAESEGRKIEQINLASGQREAKIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
fa1090_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv32_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv11_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv28_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv96_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv02_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv03_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv04_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv05_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv01_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv07_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv12_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv18_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv19_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv21_519ass	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv27_519	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv20_519ass	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv06_519ass	181	KRARIAESEGRKIEQINLASGQREAEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR
zv29_519ass	181	KRARIAESEGRKIEQINLASGQREPEIQQSEGEAQAAVNASNAEKIARINRAKGEAESLR

z2491_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv26_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv22_519ass	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
fa1090_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv32_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv11_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv28_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv96_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv02_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv03_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv04_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv05_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv01_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv07_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv12_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv18_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv19_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv21_519ass	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv27_519	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv20_519ass	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv06_519ass	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL
zv29_519ass	241	LVAEANAEAIRQIAAAALQTQGGADAVNLKIAEQYVAAFNNLAKESNTLIMPANVADIGSL

z2491_519	301	ISAGMKIIDSSKTAK*
zv26_519	301	ISAGMKIIDSSKTAK*
zv22_519ass	301	ISAGMKIIDSSKTAK*
fa1090_519	301	ISAGMKIIDSSKTAK*
zv32_519	301	ISAGMKIIDSSKTAK*
zv11_519	301	ISAGMKIIDSSKTAK*
zv28_519	301	ISAGMKIIDSSKTAK*
zv96_519	301	ISAGMKIIDSSKTAK*
zv02_519	301	ISAGMKIIDSSKTAK*
zv03_519	301	ISAGMKIIDSSKTAK*
zv04_519	301	ISAGMKIIDSSKTAK*
zv05_519	301	ISAGMKIIDSSKTAK*
zv01_519	301	ISAGMKIIDSSKTAK*
zv07_519	301	ISAGMKIIDSSKTAK*
zv12_519	301	ISAGMKIIDSSKTAK*
zv18_519	301	ISAGMKIIDSSKTAK*
zv19_519	301	ISAGMKIIDSSKTAK*
zv21_519ass	301	ISAGMKIIDSSKTAK*
zv27_519	301	ISAGMKIIDSSKTAK*
zv20_519ass	301	ISAGMKIIDSSKTAK*
zv06_519ass	301	ISAGMKIIDSSKTAK*
zv29_519ass	301	ISAGMKIIDSSKTAK*

FIG. 22B

FIG. 23A

FIG. 23B

FIG. 23C

fa1090	361	XDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm3asbc	361	XDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm32asbc	361	XDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm23asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm27bc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm09	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm10	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm24	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm25	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm14	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm04	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm11asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm08n	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm96	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm01	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm02	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm03	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm07	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm12	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm18	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm19	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm20	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm21	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm06	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm17	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm13	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm05	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
z2491	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm22	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm26	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm28	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm29asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm16	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm15	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
zm31asbc	361	VDRHYITLGAPLFVATAHPVTRKALNRLIMAQDTGSAIKGAVRVDYFWGYGDEAGELAGK
fa1090	421	QKTTGYVWQLLPNGMKPEYRP*
zm3asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm32asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm23asbc	421	MKEPGYVWQLLPNGMKPEYRP*
zm27bc	421	MKEPGYVWQLLPNGMKPEYRP*
zm09	421	QKTTGYVWQLLPNGMKPEYRP*
zm10	421	QKTTGYVWQLLPNGMKPEYRP*
zm24	421	QKTTGYVWQLLPNGMKPEYRP*
zm25	421	QKTTGYVWQLLPNGMKPEYRP*
zm14	421	QKTTGYVWQLLPNGMKPEYRP*
zm04	421	QKTTGYVWQLLPNGMKPEYRP*
zm11asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm08n	421	QKTTGYVWQLLPNGMKPEYRP*
zm96	421	QKTTGYVWQLLPNGMKPEYRP*
zm01	421	QKTTGYVWQLLPNGMKPEYRP*
zm02	421	QKTTGYVWQLLPNGMKPEYRP*
zm03	421	QKTTGYVWQLLPNGMKPEYRP*
zm07	421	QKTTGYVWQLLPNGMKPEYRP*
zm12	421	QKTTGYVWQLLPNGMKPEYRP*
zm18	421	QKTTGYVWQLLPNGMKPEYRP*
zm19	421	QKTTGYVWQLLPNGMKPEYRP*
zm20	421	QKTTGYVWQLLPNGMKPEYRP*
zm21	421	QKTTGYVWQLLPNGMKPEYRP*
zm06	421	QKTTGYVWQLLPNGMKPEYRP*
zm17	421	QKTTGYVWQLLPNGMKPEYRP*
zm13	421	QKTTGYVWQLLPNGMKPEYRP*
zm05	421	QKTTGYVWQLLPNGMKPEYRP*
z2491	421	QKTTGYVWQLLPNGMKPEYRP*
zm22	421	QKTTGYVWQLLPNGMKPEYRP*
zm26	421	QKTTGYVWQLLPNGMKPEYRP*
zm28	421	QKTTGYVWQLLPNGMKPEYRP*
zm29asbc	421	QKTTGYVWQLLPNGMKPEYRP*
zm16	421	QKTTGYVWQLLPNGMKPEYRP*
zm15	421	QKTTGYVWQLLPNGMKPEYRP*
zm31asbc	421	QKTTGYVWQLLPNGMKPEYRP*

FIG. 23D